



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 07 2012

ACTION MEMORANDUM

SUBJECT: Request for Increase in Site Budget Ceiling
Stony Hill Road TCE Site
Wake Forest, Wake County, North Carolina

FROM: Kenneth Rhame, On-Scene Coordinator
Emergency Response and Removal Branch

TO: Franklin E. Hill, Director
Superfund Division

THRU: Shane Hitchcock, Chief
Emergency Response and Removal Branch

I. PURPOSE

The purpose of this Action Memorandum pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is to request and document approval for a ceiling increase for continuation of the removal action described herein for the Stony Hill TCE site (the "Site"), located in Wake Forest, Wake County, North Carolina. The Site poses a threat to public health and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.415(b)(2) criteria for removal actions. An emergency response was initiated on July 10, 2012, to begin removal activities, which involved provision of bottled water for residents being exposed to groundwater contaminated with trichloroethylene (TCE) exceeding the Region 4 Removal Management Level (RML). Additional funds are requested to extend a water supply line to the impacted residences. The current project ceiling is \$250,000. The proposed increase of \$650,000 will raise the total project cost to \$900,000, of which \$650,000 is expected to come from the Regional Advice of Allowance.

II. SITE CONDITIONS AND BACKGROUND

Site ID: B4S8
CERCLIS ID: NCN000410857
TYPE: Time-Critical

A. Site Description

1. Removal Site Evaluation

In August 2005, a resident at 7305 Stony Hill Road contacted Wake County, North Carolina with a complaint of a petroleum odor in drinking water from a private well. Wake County personnel

sampled the well and detected TCE. County officials notified the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Water Quality Aquifer Protection Section (APS) of the findings. The APS confirmed Wake County's results and also collected water samples at 7303 and 7312 Stony Hill Road. TCE was not detected in the samples collected at these locations. The homes at 7305 and 7309 Stony Hill Road were connected to an uncontaminated well located at 7303 Stony Hill Road. The APS also identified 7303 Stony Hill Road as the suspected source of the contamination and issued a Notice of Corrective Action to the owner of the property.

The Site was transferred to the NCDENR Inactive Hazardous Sites Branch (IHSB) in 2007. IHSB collected water samples from properties located at 7303, 7305 and 7333 Stony Hill Road in June 2012. TCE was detected at 22 parts-per-billion (ppb) at 7333 Stony Hill Road, prompting IHSB to refer the Site to the U.S. Environmental Protection Agency Region 4 Emergency Response and Removal Branch (ERRB) on July 10, 2012.

The July 10, 2012 NCDENR referral to ERRB requested that the EPA provide bottled water to the residents of 7333 Stony Hill Road and conduct additional potable well sampling to determine if other exposures were occurring in the area. Based on the analytical results at 7333 Stony Hill Road at 22 ppb, which is above the EPA's Removal Management Level (RML) of 8 ppb and the Maximum Contaminant Level (MCL) of 5 ppb, the EPA began delivery of bottled water to the residents of the property on July 11, 2012. The EPA also began collecting access agreements to sample additional water wells in the area.

On July 12, 2012, the EPA sampled seven wells along Stony Hill Road. Analytical results received on July 13, 2012, indicated that the wells at three of the properties, which included four homes (property located at 7317 Stony Hill Road has two residences) are contaminated with TCE above the RML. Groundwater collected from the well located at one of the properties also exceeded the RML for tetrachloroethylene (PCE) of 100 ppb. Bottled water was delivered to the properties on July 13, 2012. The residents were put on a water delivery service on July 16, 2012.

On July 19, 2012, samples were collected at 11 additional water wells in the area. Of the 11 wells, a sample collected at 1009 Stony Hill Road yielded a TCE concentration of 7.7 ppb, above the MCL. Two of the 11 wells were found to be contaminated with TCE and PCE below their respective MCLs. Bottled water delivery to 1009 Stony Hill Road began on July 20, 2012.

On July 25, 2012, the EPA received requests from residents to sample 15 additional wells in a nearby neighborhood. The EPA collected these samples on July 26, 2012. Analytical results were received on July 27, 2012. There were no detections exceeding MCLs, though one well located at 7608 Trail Blazer Trail was within 0.1 ppb of the MCL at 4.9 ppb. The EPA began water delivery to this home on July 27, 2012. Two other residences, 7600 and 7604 Trail Blazer Trail had detectable concentrations of TCE. Notably, the house located at 7600 Trail Blazer Trail has a carbon filtration system, and the TCE concentration pre and post-filter was found to be 4.9 ppb and 2 ppb TCE, respectively. Drinking water collected at the home located at 7604 Trail Blazer Trail yielded 3.6 ppb TCE.

2. Physical Location

The Site currently consists of several single family homes located along Stony Hill Road, High Trail Court, and Trail Blazer Trail, in Wake Forest, Wake County, North Carolina. The

geographic coordinates for the Site location are approximately latitude 35° 59' 20.462" north and longitude 78° 36' 29.383" west. Definition of the Site may change as the investigation continues.

3. Site Characteristics

Currently, the Site consists of residential properties possessing well waters contaminated with TCE and/or PCE above the MCL of 5 ppb for each contaminant. Currently this includes eight properties located on six land parcels. TCE has also been detected below the MCL at five additional wells, one of which yielded 4.9 ppb. A total of 32 wells have been sampled to date. The potential source of the TCE contamination according the NCDENR APS is 7303 Stony Hill Road, where a vapor degreaser was once operated.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

TCE and PCE are hazardous substances as defined by Section 101(14) of CERCLA and has been detected in residential wells at the Site exceeding RMLs and/or MCLs. The presence of TCE and PCE in groundwater at this Site constitutes a release of hazardous substance into the environment.

5. National Priorities List (NPL) Status

The Site is not on the NPL.

6. Maps, Pictures, and Other Graphic Representations

Maps, pictures and other graphics can be made available upon request.

B. Other Actions to Date

1. Previous Actions

No previous actions have been performed by the EPA at this Site.

2. Current Actions

As described in more detail in Section II.A of this document, the EPA mobilized to the Site on July 11, 2012, to deliver bottled water to the resident of 7333 Stony Hill Road. On July 12, 2012, the EPA sampled wells at seven additional residences in the area. Based on analytical results, the EPA began delivery of bottled water to three of the seven residences. On July 19, 11 residential wells were sampled, and on July 20, 2012, bottled water delivery to one of the homes was initiated. On July 25, 2012, the EPA received requests from residents to sample 15 additional wells in a nearby neighborhood. The EPA collected this round of samples on July 26, 2012. On July 27, 2012, the EPA received sample results, and based upon a sample result for TCE of 4.9 ppb, 0.1 ppb below the MCL, bottled water delivery to 7608 Trail Blazer Trail began on July 27, 2012.

C. State and Local Roles

1. State and Local Actions to Date

As discussed in Section II.A of this document, representatives of Wake County sampled the well located at 7305 Stony Hill Road in August 2005 and detected TCE. Wake County officials notified the NCDENR Division of Water Quality Aquifer Protection Section of the contamination. APS confirmed Wake County's results and sampled 7303 and 7312 Stony Hill Road. TCE was not detected at these locations. The houses at 7305 and 7309 Stony Hill Road were connected to the clean well at 7303 Stony Hill Road to mitigate exposures occurring on those properties. The State subsequently issued a Notice of Corrective Action to the owner of the property located at 7303 Stony Hill Road. The Site was transferred to IHSB in 2007. IHSB performed additional sampling in June 2012. IHSB referred the Site to the EPA ERRB on July 10, 2012.

2. Potential for Continued State and Local Response

State and local agencies have indicated that their funding is insufficient to conduct the necessary response actions at the Site.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

Conditions at the Site meet criteria specified under Section 300.415(b)(2) of the *National Oil and Hazardous Substance Pollution Contingency Plan* (NCP) for implementation of a removal action.

Section 300.415 (b)(2)(i) Actual or potential exposure to nearby human populations, or the food chain from hazardous substances pollutants or contaminants

Samples collected at 7317, 7327 and 7333 Stony Hill Road exceed the RML for TCE of 8 ppb. A sample collected at 7327 also exceeds the RML for PCE of 100 ppb. A sample collected at 1009 High Trail Court exceeds the MCL for TCE of 5 ppb. Five additional wells were determined to be contaminated with TCE below the MCL. Additional hazardous substances, including 1,1-dichloroethylene, 1,1,1-trichloroethylene, 1,2-dichloroethylene and cis-1,2-dichloroethylene were detected in a number of the samples.

Section 300.415 (b)(2)(vii) The availability of other appropriate federal or state response mechanisms to respond to the release

At this time, there are no additional federal or State mechanisms able to respond to this incident in the necessary manner.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

Anticipated removal activities for the Site include may include the following:

- Continue provision of bottled water until a more permanent remedy can be implemented at the Site.
- Installation and maintenance of temporary Point-of-Entry Carbon Filtration Systems at residences that have drinking water wells with contaminants above health risk thresholds for dermal exposure and/or inhalation as determined by OSC.
- Extend a water line to the impacted homes from a nearby community water system operated by a privately owned water provider.
- Perform additional sampling and analysis of residential wells in the area.
- Conduct an investigation aimed at identification of the source of the contamination and provide for mitigation of the source as appropriate

All waste transferred off-site will following the CERCLA Off-Site Rule (40 C.F.R. § 300.4440).

Extension of a water line to the impacted residences is the desired removal option for the following reasons:

- It provides for a permanent remedy for mitigation of ingestion, inhalation and direct contact exposures from TCE from contaminated water wells serving the impacted residences.
- Installation of point-of-entry filters is not a viable option for many of the households, as the TCE concentration is such that saturation and breakthrough of TCE may occur on a frequent basis, thus reducing their cost effectiveness due to increased sampling and filter replacement needs and providing for uncertainty as to exposure mitigation.

2. Contribution to Remedial Performance

The proposed removal action is warranted to address the threats discussed in Section III, which meet NCP Section 300.415(b)(2) removal criteria. The removal action described in this Action Memorandum would be consistent with any remedial action.

3. Description of Alternative Technologies

No formal evaluation of alternative technologies has been made to date. Activities such as recycling and/or reuse will be utilized to the extent practicable. Other alternative technologies will be evaluated as appropriate and practicable considering the scope of this removal action.

4. Engineering Evaluation/Cost Analysis (EE/CA)

This proposed action is a time-critical removal and does not require an EE/CA.

5. Applicable or Relevant and Appropriate Requirements (ARARs)

On-Site removal activities conducted under CERCLA are required to attain ARARs to the extent practical considering the exigencies of the situation. Off-site removal activities need only comply with all applicable Federal and State regulations, unless there is an emergency.

6. Project Schedule

Extension of the water line to residents with the highest TCE concentrations is expected to begin within 180 days and should be completed within 12 months.

B. Estimated Costs

<u>Extramural Costs</u>	<u>Current Ceiling</u>	<u>Proposed Ceiling</u>
Regional Allowance Costs		
ERRS	\$170,000	\$650,000
Non Regional Allowance Costs		
START	\$30,000	\$100,000
Subtotal Extramural Costs	\$200,000	\$750,000
Contingency	\$50,000	\$150,000
TOTAL EXTRAMURAL COSTS	\$250,000	\$900,000

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If this response action is significantly delayed, residents will continue to be exposed to TCE concentrations exceeding the MCL or RML through dermal contact and inhalation during baths and showers. Failure of point-of-entry filtration systems may result in exposure through ingestion, direct contact and inhalation.

VII. OUTSTANDING POLICY ISSUES

No outstanding policy issues have been determined at this time.

VIII. ENFORCEMENT

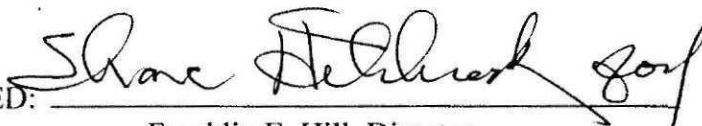
Potentially Responsible Parties have been identified and contacted, and Notices of Federal Interest have been issued. Enforcement activities are ongoing and will occur parallel with ongoing removal activities, which will continue due to the urgency of the situation. Transition to an enforcement-lead removal can take place, as appropriate, should enforcement activities prove successful.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Stony Hill Road TCE site, located in Wake Forest, Wake County, North Carolina, developed in accordance with CERCLA as amended, and not inconsistent with the National Contingency Plan. The document is based on the administrative record for the Site.

Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal action. This removal action is anticipated to be fund-lead with a total project ceiling of **\$900,000**. I recommend your approval of this Action Memorandum.

APPROVED: _____



Franklin E. Hill, Director
Superfund Division

DATE: _____

9/7/12

DISAPPROVED: _____

Franklin E. Hill, Director
Superfund Division

DATE: _____